

Quality Improvement

Theory and Application Basics

Quality Management System



Two Often Confused Components a QMS

Quality Assurance:

Are we doing what we said we would?

Meeting the standard

Quality Improvement:

Can we increase efficiency, effectiveness, outcome?

Raising the quality

Quality Assurance

Defined Success Criteria



Capture Data

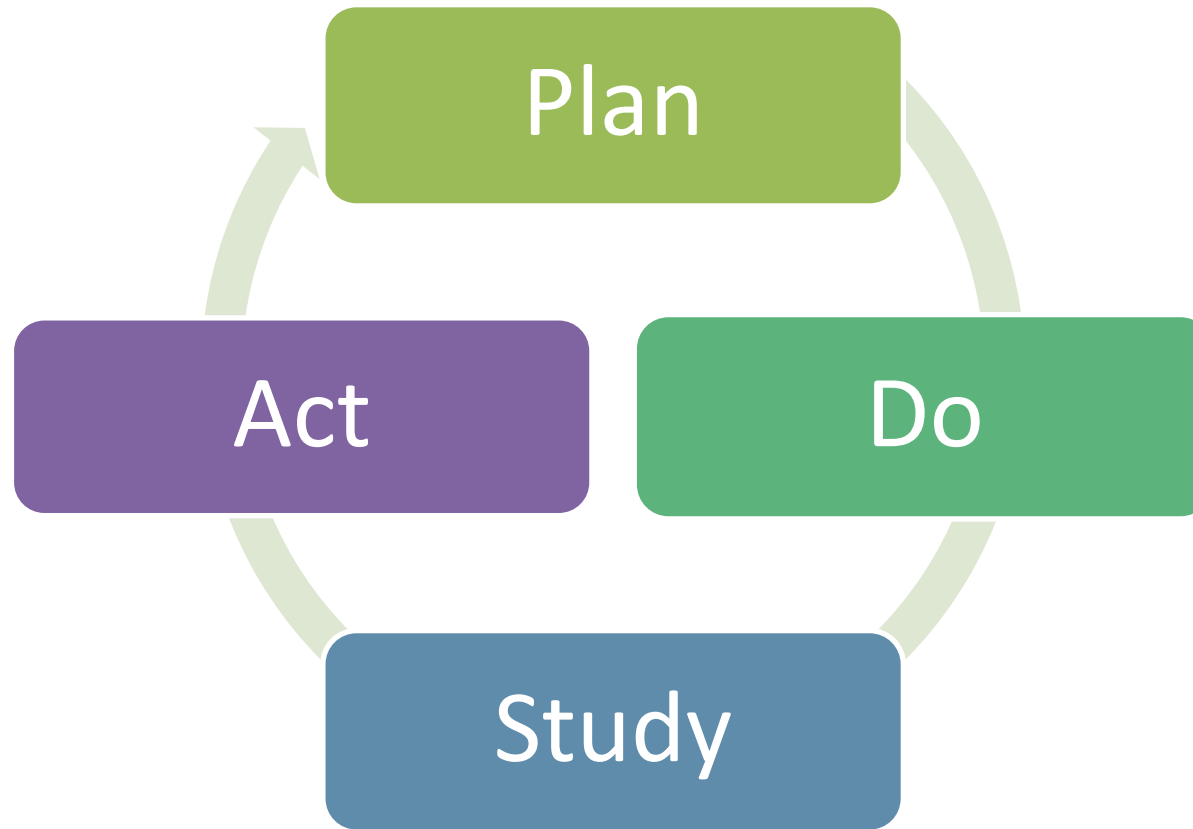


Compare Results



Take Corrective Action

Quality Improvement



“Quality Improvement” (a.k.a. QI)

What it is...

- An initiative to *increase* the quality of a good or service
- Accomplished by comparing past outcomes to desired future outcomes
- Adjusting the current process

What it isn't...

- Not an initiative to ensure the quality of a good or service
- Not accomplished by comparing outcomes to requirements or expectations
- Validating the current process

Test your Understanding of the Difference

QI VS. QA QUIZ

Is the Example a QA Focus or a QI Focus?

Which staff member failed to transfer the call to the correct extension?

A green rounded square button with a white shadow, containing the text "QA" in white.

QA

A green rounded square button with a white shadow, containing the text "QI" in white.

QI

Is the Example a QA Focus or a QI Focus?

Are we creating an environment encouraging clinicians to report errors?

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Is the Example a QA Focus or a QI Focus?

How do we reduce production errors on the widget line?

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QA

A green rounded square button with a white shadow, containing the text "QI" in white.

QI

Is the Example a QA Focus or a QI Focus?

Patient had a bad outcome;
were the doctors or nurses at
fault?

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QA

A green rounded square button with a white shadow, containing the text "QI" in white.

QI

Is the Example a QA Focus or a QI Focus?

What could we do to increase the efficiency of chart filing?

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Quality Improvement

THE FRAMEWORK



Four Common QI Models

1. PDSA

2. 6σ

3. FADE

4. CQI

PDSA (a.k.a. the “Deming” Model) QI Model

What? The PDSA model is a reiterative four-step cycle based on action learning

Who? W. Edwards Deming

When? 1943

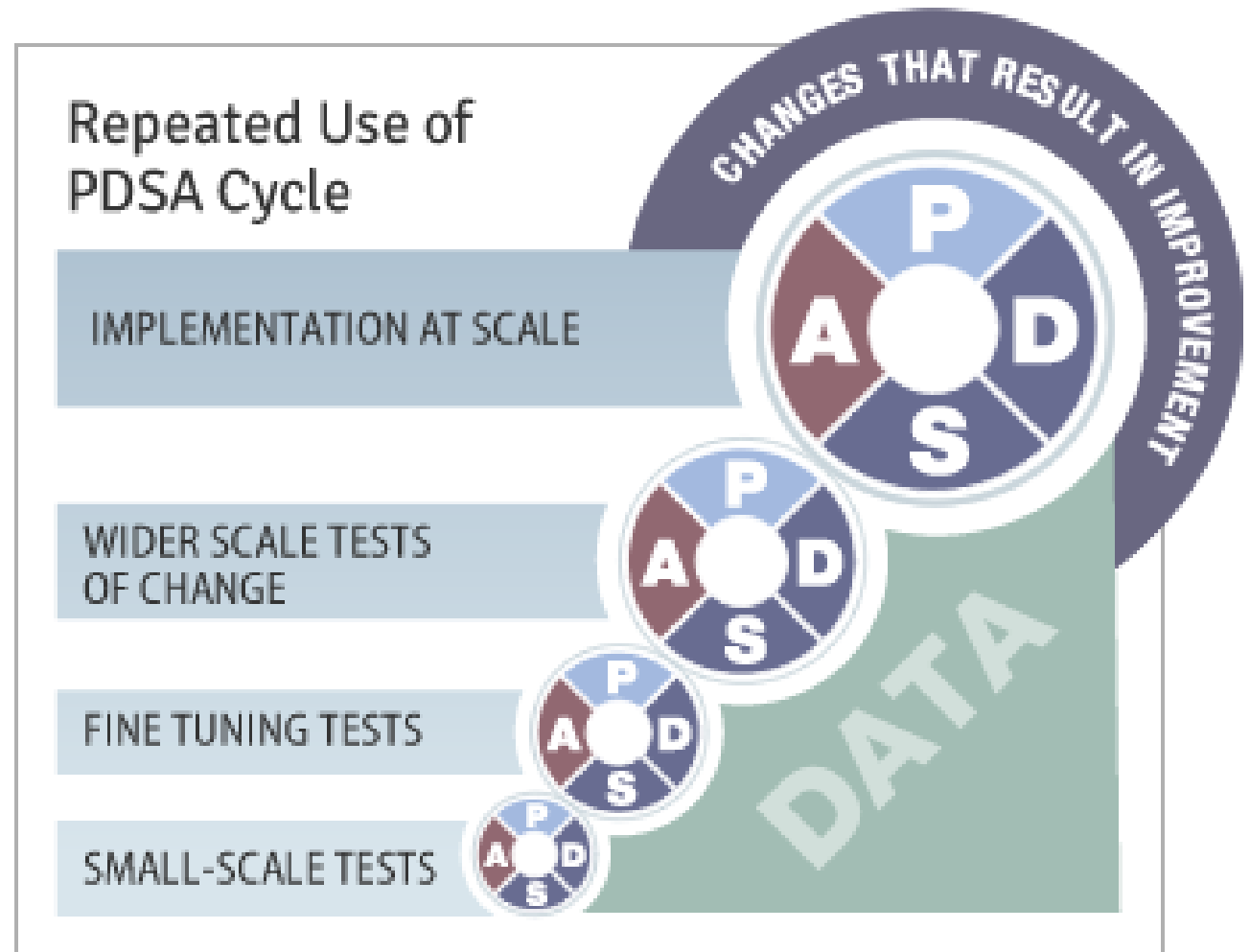
Where? The manufacturing sector (auto)

PLAN

DO

STUDY

ACT



6σ (Six Sigma) QI Model

What? The six sigma model is

Who? The Motorola Company

Where? The manufacturing sector (electronics)

Why? Reduce defects

DEFINE

MEASURE

ANALYZE

IMPROVE/DESIGN

CONTROL/VALIDATE



FADE QI Model

What? The FADE model is a four-step cycle

Who? Consulting Firm Organizational Dynamics
Institute, Wakefield, MA

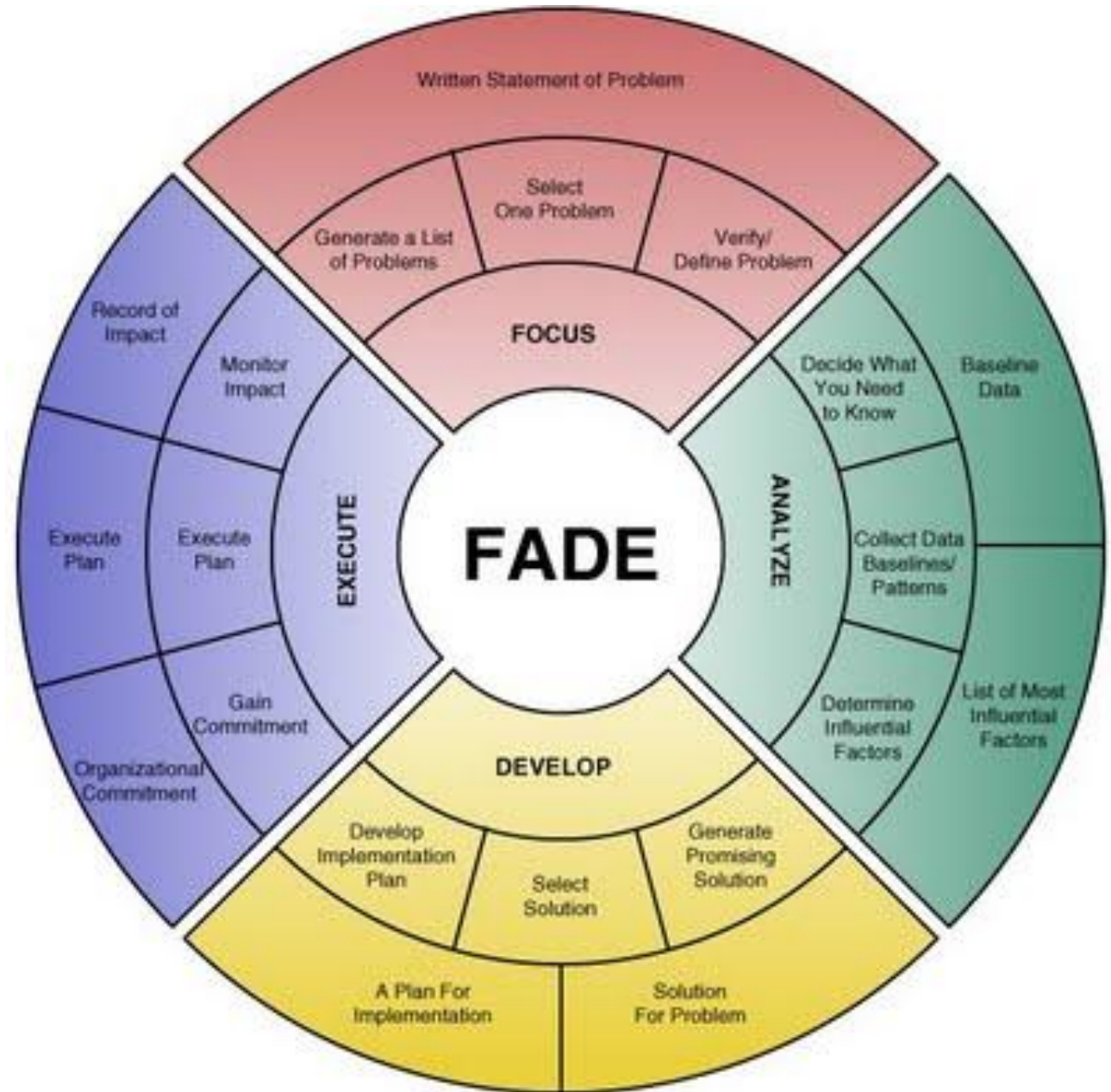
Where? The healthcare field

FOCUS

ANALYZE

DEVELOP

EXECUTE



Continuous Quality Improvement (CQI) QI Model

What? The CQI model is a culmination of the works of the three prominent quality improvement gurus

Who? W. Edwards Deming, Walter A. Shewhart & Joseph Juran

Where? The healthcare field (managed care & disease management)

Why? Systems focused

PLAN

IMPLEMENT

REVIEW

IMPROVE



Two Philosophies

1. TQM

2. Lean

Total Quality Management (TQM) Principles

What? The TQM focuses on more than process and product, it focuses on the organizational culture

Who? Walter A. Shewhart

When? 1950s

Where? The manufacturing sector (auto)

ETHICS: Foundational element of TQM

INTEGRITY: Foundational element of TQM

TRUST: Foundational element of TQM

TRAINING: Building block element of TQM

TEAMWORK: Building block element of TQM

LEADERSHIP: Building block element of TQM

RECOGNITION: Binding element of TQM

COMMUNICATION: Encompassing element of TQM

Note: TQM is an approach to applying a model of quality improvement, rather than a model. It is built on the PDSA framework.



Lean Management Principles

What? Maximize value for customers

while using fewer resources and minimizing waste

Who? James P. Womack, Daniel Roos, and Daniel T. Jones

When? 1980s

Where? The manufacturing sector (auto)

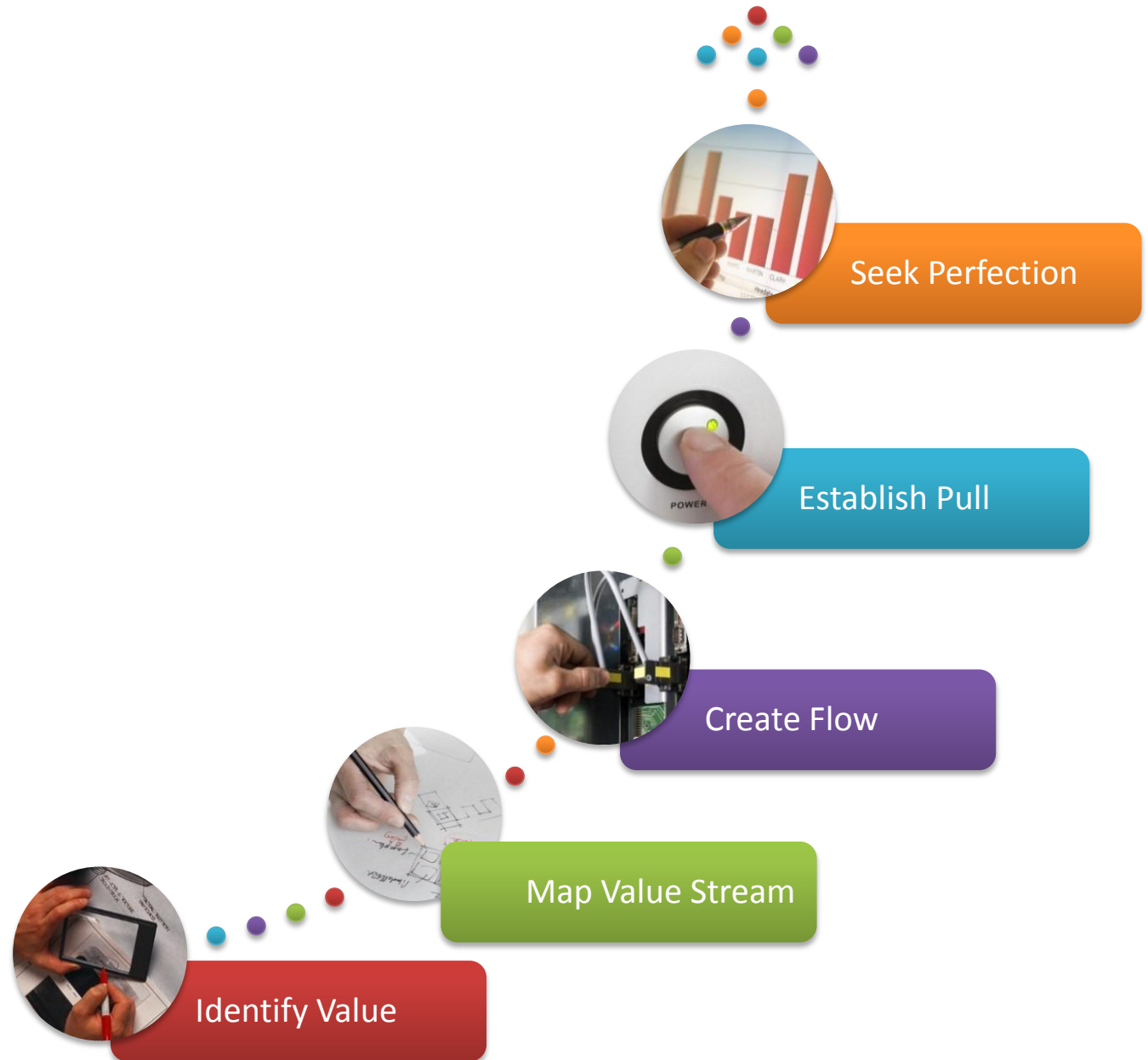
VALUE: Specify value from the standpoint of the end customer

VALUE STREAM: Identify all the steps in the value stream, eliminating whenever possible those steps that do not create value

FLOW: value-creating steps occur in tight sequence so the product will flow smoothly toward the customer

PULL: As flow is introduced, let customers pull value from the next upstream activity

PERFECTION: Process repeats until a state of perfection is reached in which perfect value is created with no waste



Iowa WIC

PREFERRED QUALITY IMPROVEMENT METHOD

Iowa WIC Quality Improvement Method

Lean Management Principles



Continuous Quality Improvement Model



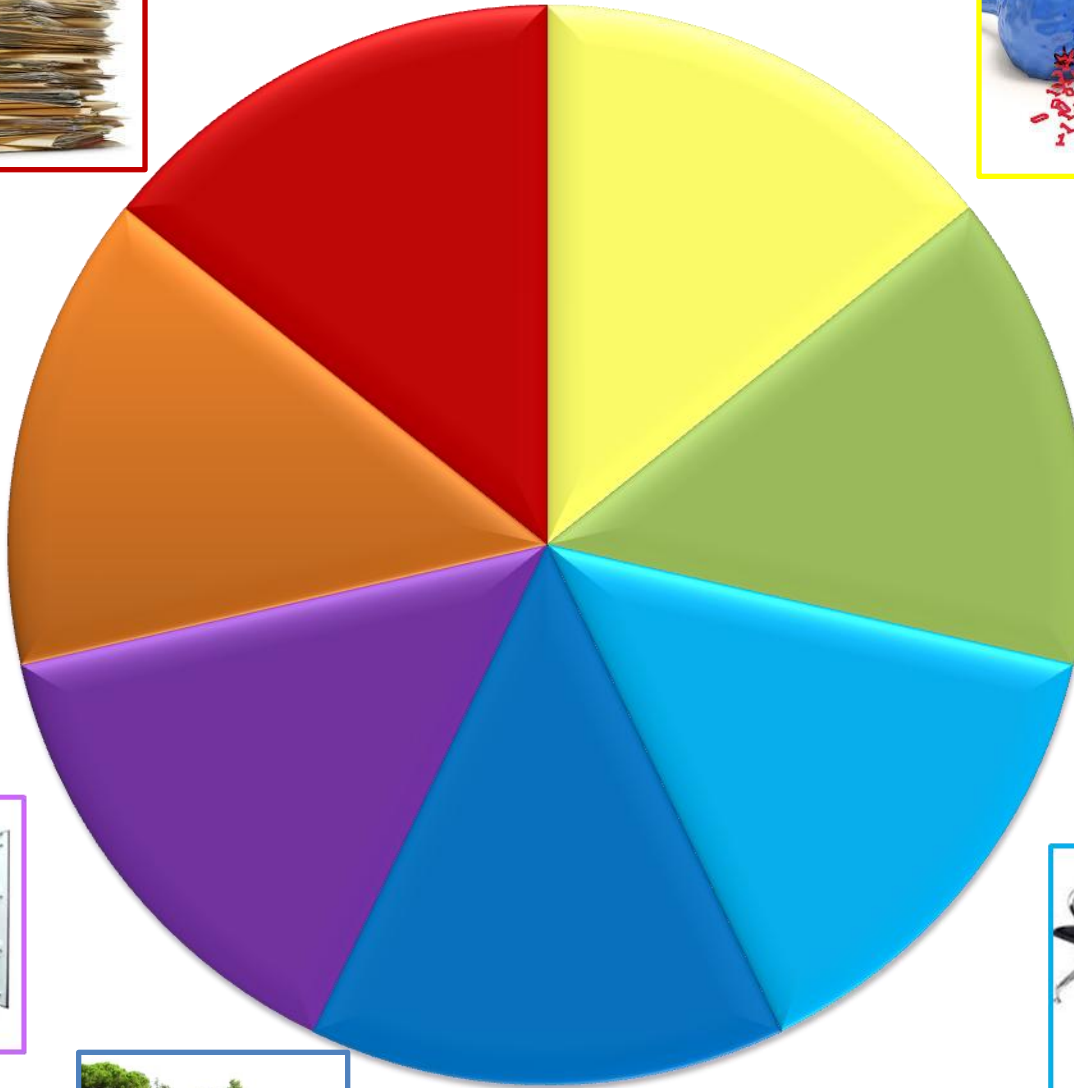
Adopting the Method

1. Understanding CQI and Lean Principles
2. Designate a quality champion
3. Promoting a culture of quality improvement
4. Involving everyone
5. Plan an approach

Lean Principles

- Define value from the customer perspective
- Work in the value stream
- Make the process flow
- Pull from the customer
- Pursuit of perfection

The 7 Wastes



■ OVERPRODUCTION

■ INVENTORY

■ WAITING

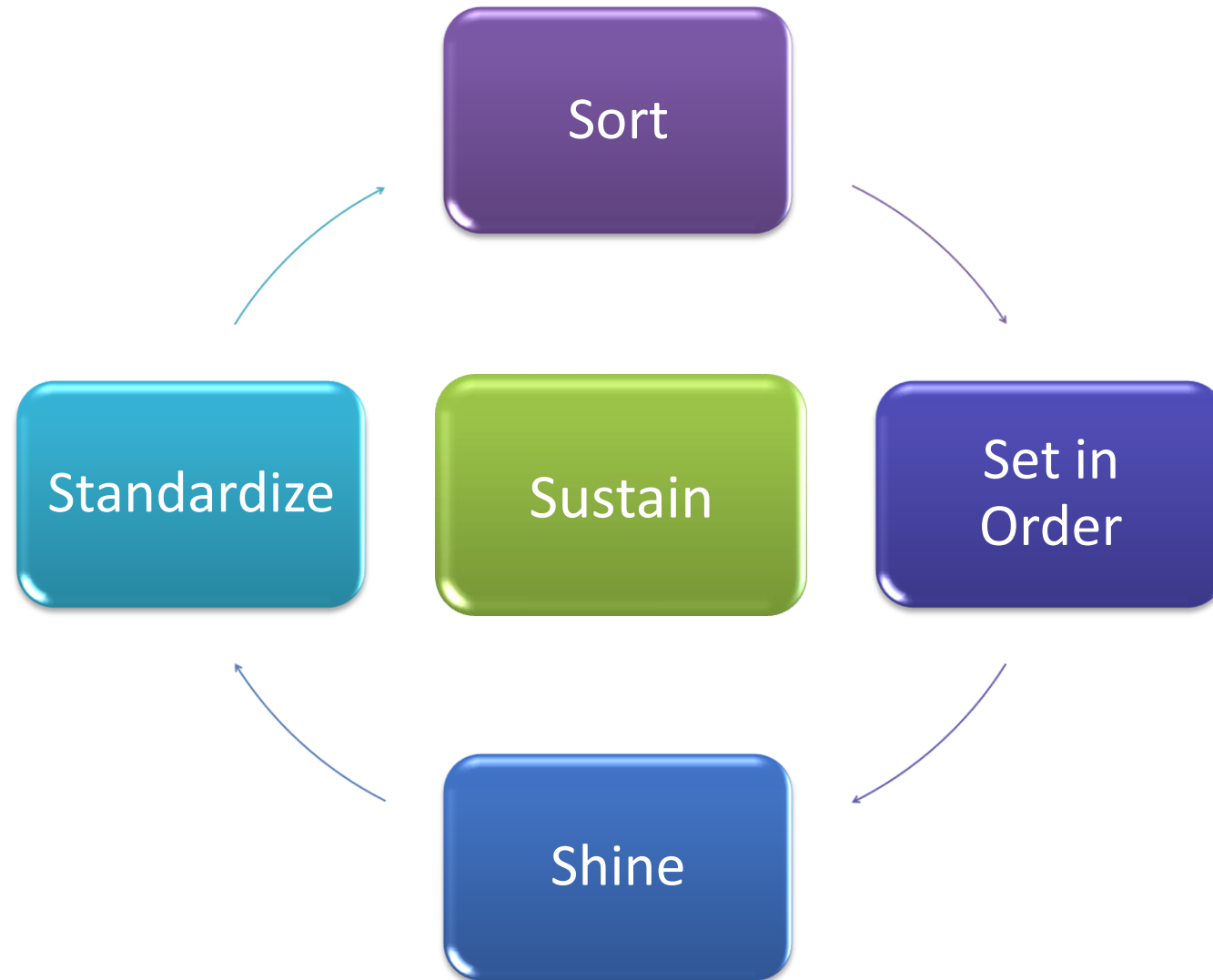
■ MOTION

■ TRANSPORTATION

■ DEFECTS

■ OVERPROCESSING

5S



Your WIC QI Toolkit

ESSENTIAL TOOLS

Tools to the Rescue

PLAN

- Rapid Improvement Event
- Flowchart
- Value Stream Map
- Cause and Effect Diagram
- Pareto Chart



Rapid Improvement Events (Kaizen)

Set goals and provide any necessary background

Review the current state and develop a plan for improvements

Implement improvements

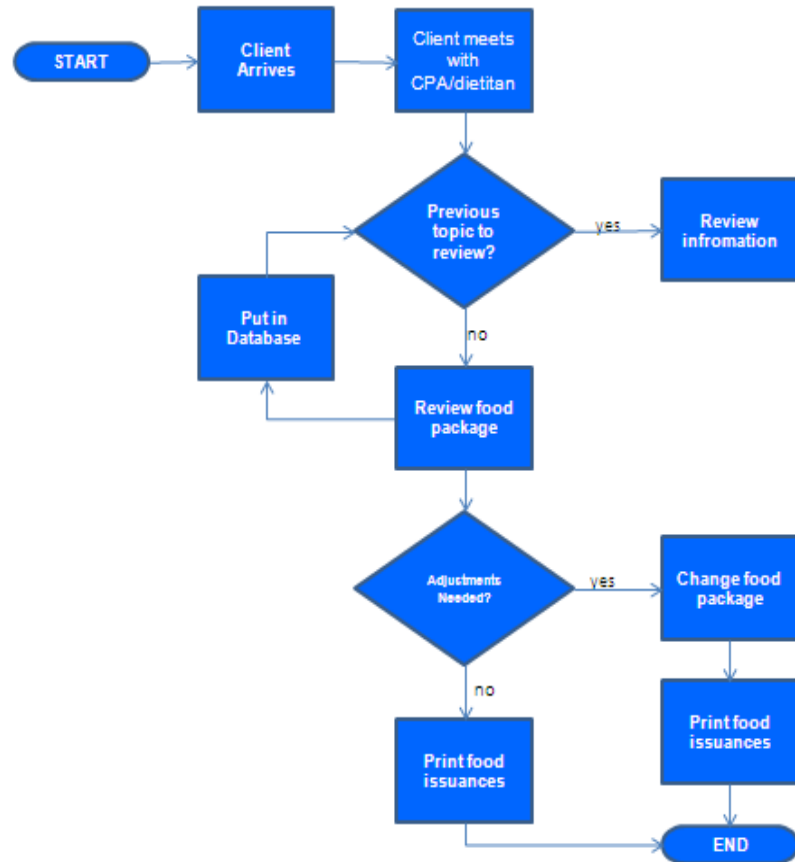
Review and fix what doesn't work

Report results and determine any follow-up items

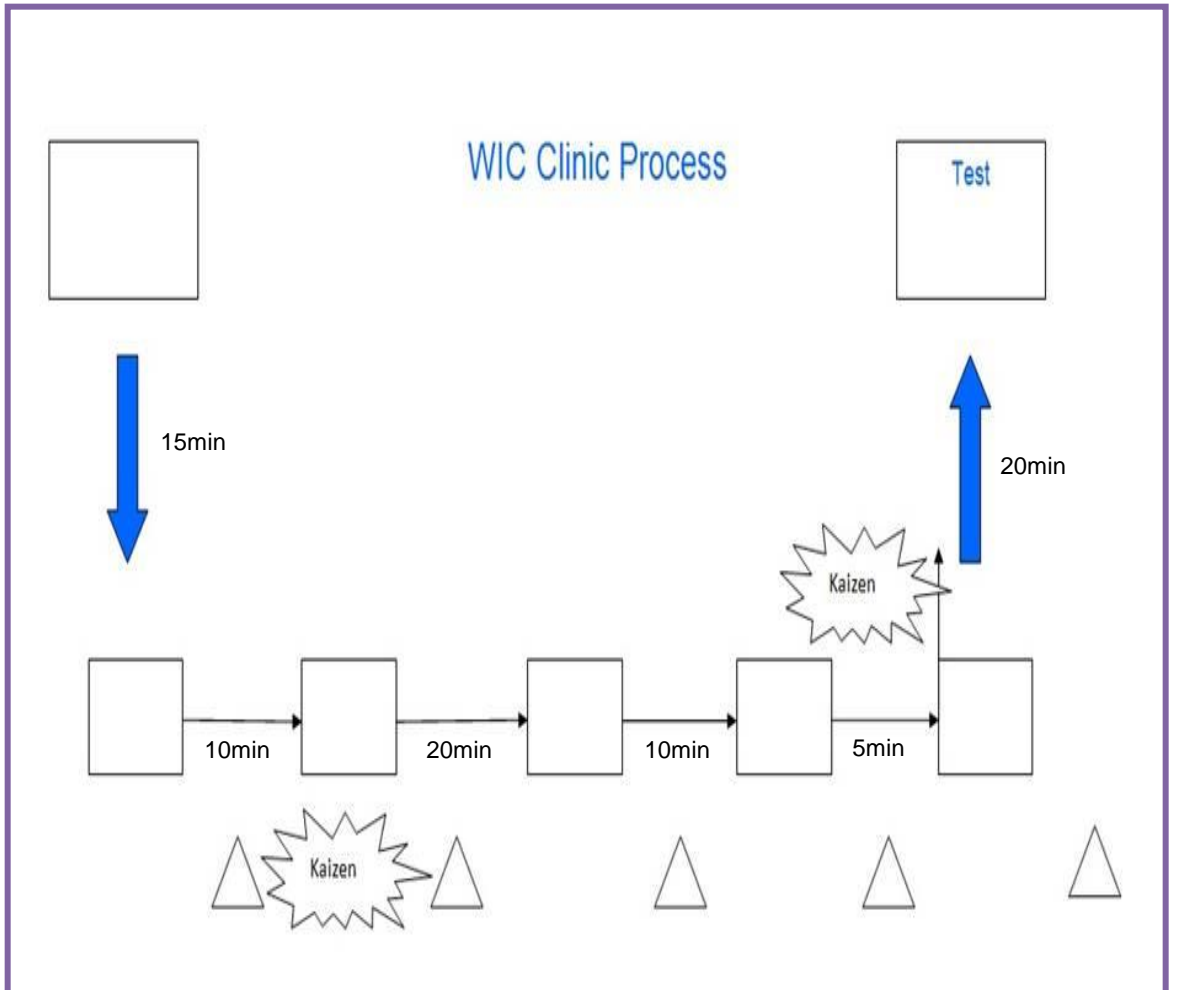


Flowcharting and Value Stream Mapping

Flowchart

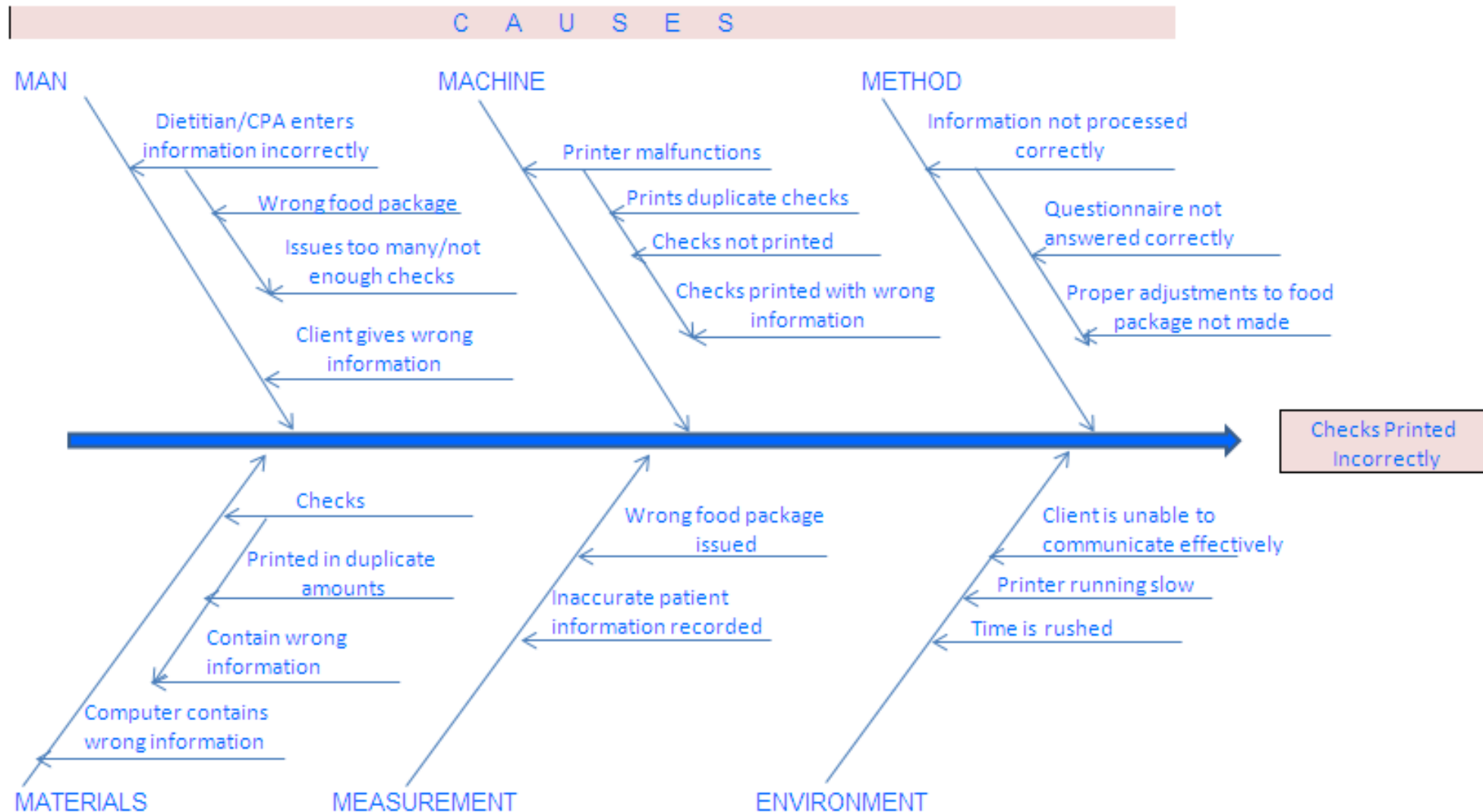


Value Stream Map

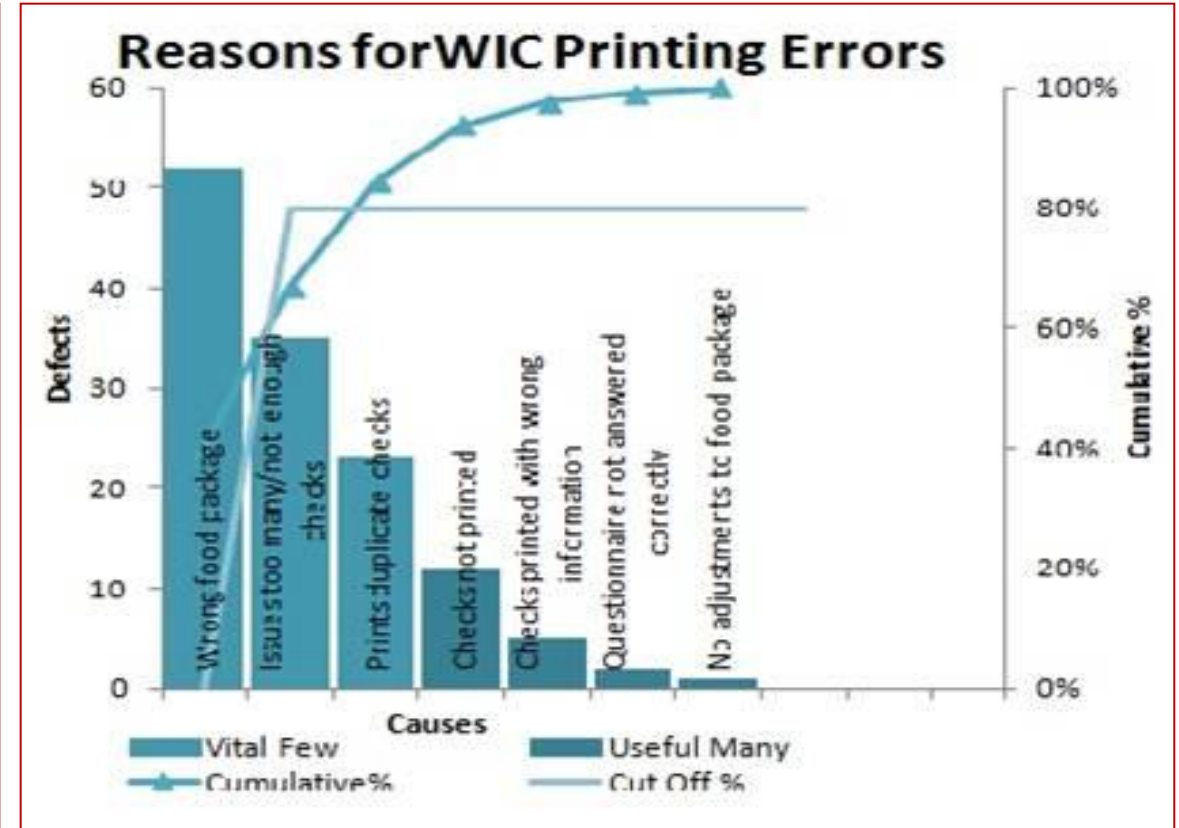
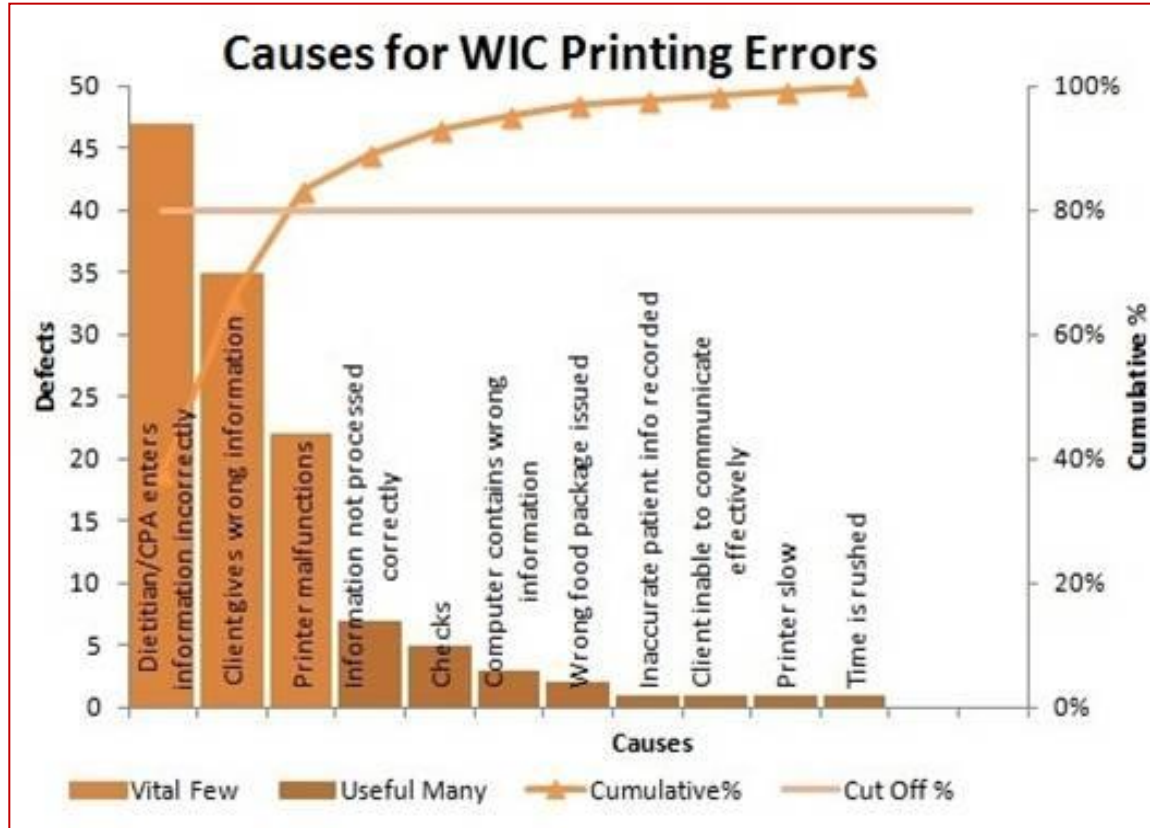


Cause & Effect Diagram

Cause & Effect Diagram / Ishikawa / Fishbone



Pareto Chart



Tools Recap

What do you have as an outcome?

Tools to the Rescue

DO

- *Flowchart*
- Storyboard



Storyboard

WIC Clinic Appointment Process

Plan

Identify an opportunity and plan for improvement.

1. Getting Started

Meet with WIC clinic client to discuss plan of action.

New Installation

Name: ComputerName-2000

Product Key: [Empty]

I agree with the terms of the license agreement ☒

Format and partition disks ☐

Install Windows

Cancel

OK

Windows Setup

2. Assemble the Team

21. Assemble the Team:
Gather all necessary information and meet with all necessary persons to form a plan of action.

3. Examine the Current Approach

Review any information that needs to be modified. Ask the client questions to understand what their needs are.

4. Identify Potential Solutions

Choose which food package best suits the client based on their needs.

[illegible]

5. Develop an Improvement Theory

With this information, come up with a new food package that will better suit the client's needs.

Do

Test the theory for improvement

6. Test the Theory

Distribute the WIC checks to the client and make an appointment for the future to see that the new food package satisfies the client.

Study

Use date to study the results of the test

7. Study the Results

In the following appointments with the client, make sure that their food package is still meeting their needs. Make any necessary adjustments.

Act

Standardize the improvement
and establish future plans

8. Standardize the Improvement or Develop New Theory

Work with all clients to develop a standardized process of issuing WIC checks to the clients.



9. Establish Future Plans

Make any necessary adjustments to the process in order to meet all of the clients' needs.

[illegible]

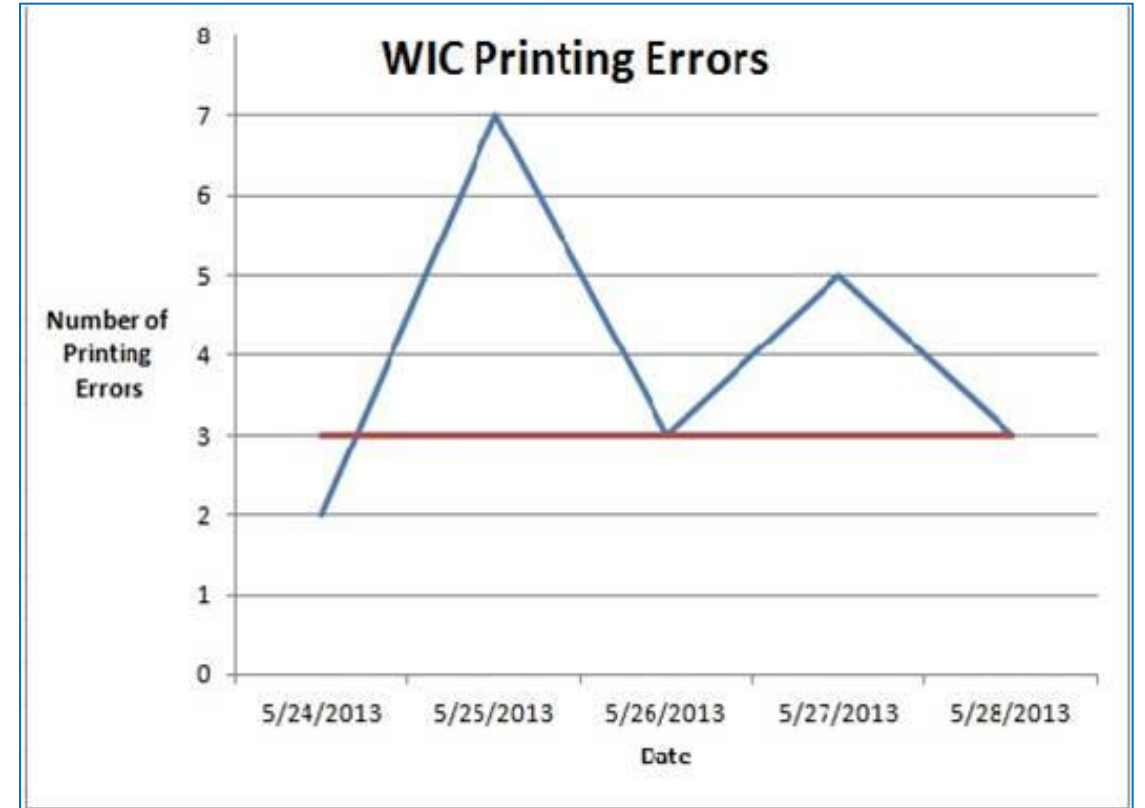
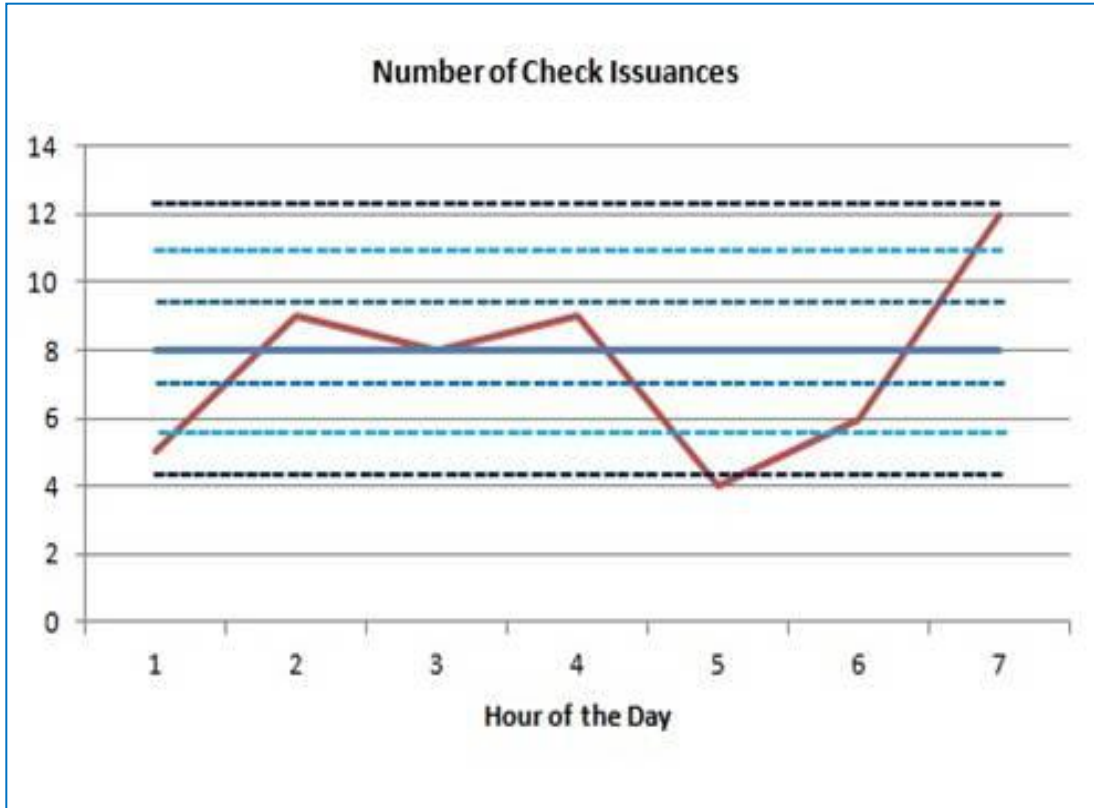
Tools to the Rescue

STUDY

- *Value Stream Map*
- Control Chart
- Run Chart
- Current Reality Tree
- Scatter Diagram

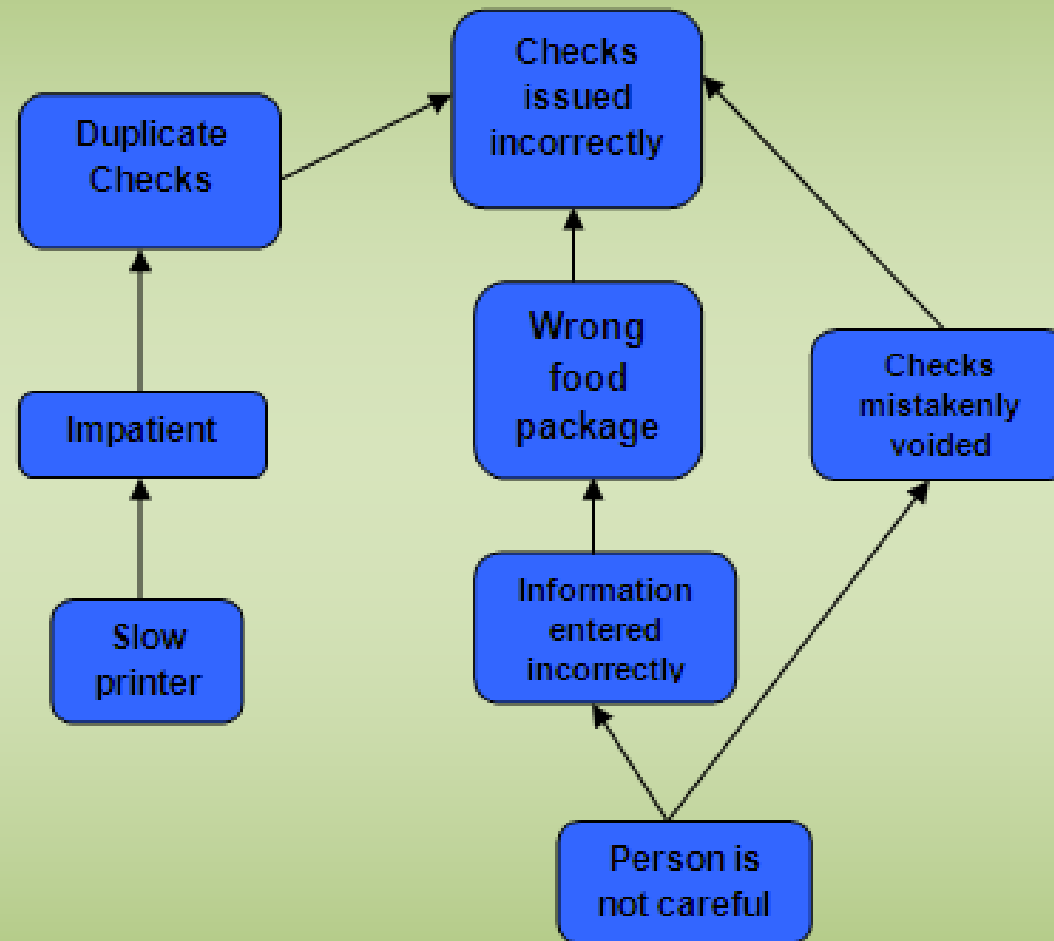


Control Charts and Run Charts

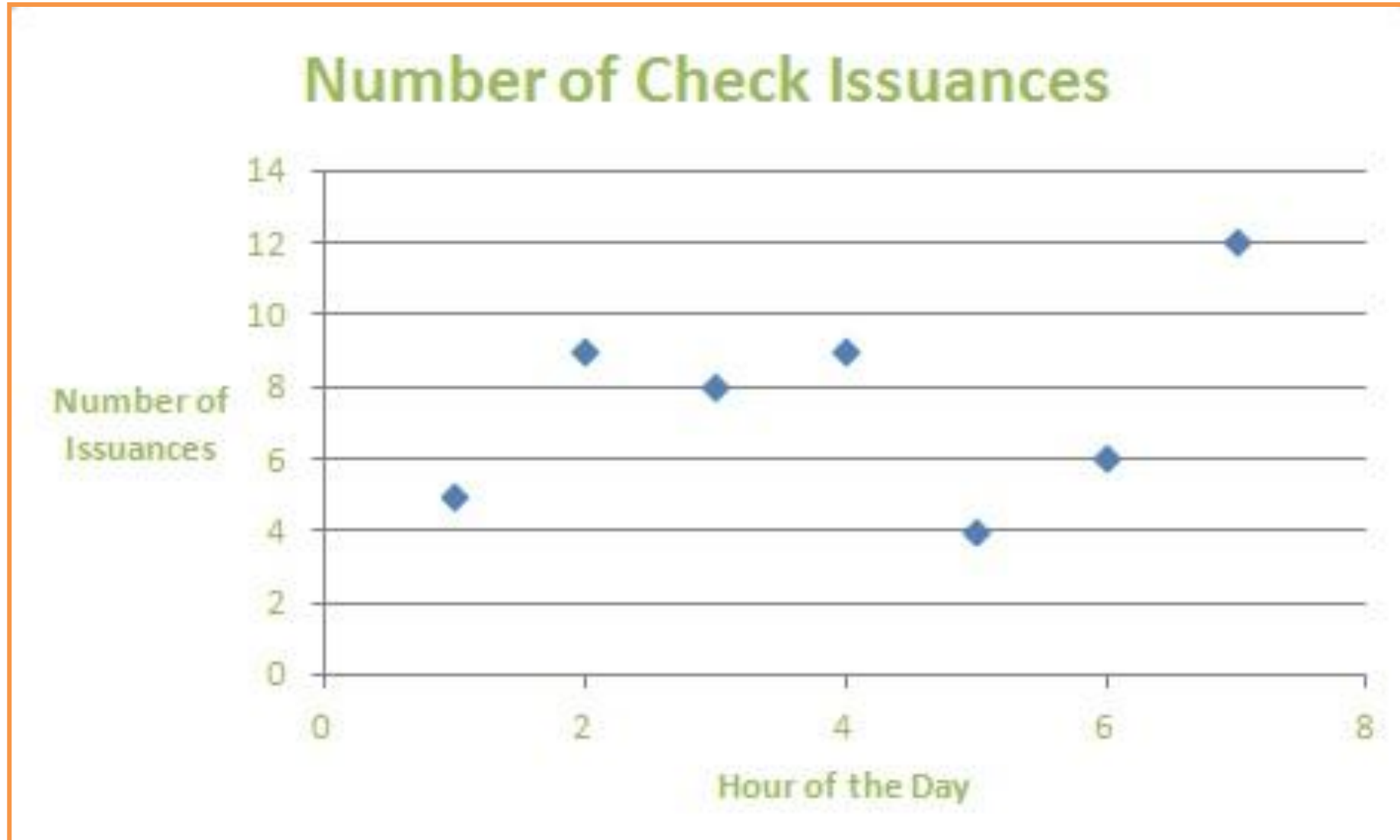


Current Reality Tree Diagram

Current Reality Tree Diagram



Scatter Diagram



Tools Recap

What do you have as an outcome?

Final Word on Tools

- Tool Kit
- Resource List



That's a wrap!

